



SPACE CENTER

# Roundup

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*explore...*

**world space congress • 2002**

NASA Johnson Space Center • Supporting Sponsor

*understand...*

*inspire...*

*explore, understand, inspire...*

as only NASA can.

See pages 4 and 5 for details

# JSC and WSC: A Perfect Fit

By Tom Cremins, Special Assistant to the Director



Johnson Space Center is home to some of the world's premiere space activities, including the International Space Station and Shuttle Space Transportation Programs. Additionally, JSC has become an international center of astronautics/cosmonautics, bioastronautics and 24-hour ground-space operations, with mission control centers linked to partner facilities around the globe.

Representatives from several countries have trained here and flown into space. Our catalogues of Earth photos trace changes to our planet over decades. Our technical and research projects bring together the best minds in the world in activities that benefit the economy and our lives.

Our labs host materials that help to inform humanity on its origins and destiny. And at the foremost, our efforts of the ISS program join a number of nations, including former adversaries, in an unprecedented research facility in space. We help to plan and shape the future of humans in space.

Houston, therefore, is the natural place to hold the World Space Congress, a decadal event that focuses on the world's activities in all facets of the space community. The World Space Congress provides JSC, and NASA overall, many opportunities to share our range of activities and programs with a large and diverse audience.

JSC will host a human spaceflight exhibit within the larger NASA exhibit, have a range of speakers and guests at the Congress and participate in a number of educational and public outreach initiatives. JSC will also host tours on site, as well as hundreds of additional visitors at Space Center Houston.

Additionally, JSC will act as a host to other NASA Centers and enterprises participating at the WSC. On behalf of the other Centers, JSC is coordinating many aspects of the NASA presence at this event, giving us a wonderful chance to show our leadership potential within the Agency. But also, the World Space Congress is a chance to unite the NASA Centers and to focus on achieving our common vision. Together, we will share our achievements and display to the world our collective mission to protect our planet, to explore the Universe and search for life, and to inspire the next generation of explorers.

The WSC offers all of us an opportunity to share our passion for our work and mission. It can also serve to help reinvigorate our community and ourselves in the march towards the stars.

Myriad areas exist for participation of JSC employees in the WSC. Please check the WSC Web site at <http://www.jsc.nasa.gov/wsc> to find out more about the Congress and how you can get involved. ❖

## Center Director Message



World Space Congress 2002 is just around the corner, and we at Johnson Space Center have the opportunity to contribute to this monumental gathering. As a Supporting Sponsor, JSC is fully committed to the success and robustness

of this international space event.

More than 13,000 people from around the world are expected to meet in Houston as part of this October event to discuss the past, present and future of space. Only twice in 10 years has a space gathering of this magnitude occurred and, this time, it is here at home.

As the leader in human spaceflight, our Center's supporting sponsorship will provide opportunities to highlight the great work done here at JSC. More than 100 speakers and presenters will represent our Center during the many technical and plenary sessions at WSC. As part of our ongoing collaboration with other Centers, JSC will support 3,000 square feet of exhibit space in the "NASA Village," a large exhibit area representing all of NASA. Center representatives will also provide VIP tours, educational activities, broadcast support and Webcast support.

Countless events at World Space Congress provide an important opportunity for space industry discussion and growth. The issues explored will no doubt affect the future of JSC. This is truly our moment to shine.

Your opportunity to be a part of World Space Congress 2002 awaits you! Visit [www.jsc.nasa.gov/wsc/](http://www.jsc.nasa.gov/wsc/) to learn more about this monumental event and what you can do to help it succeed.

*It's great to be alive and in Houston!*

FROM THE DESK OF LT. GEN. JEFFERSON D. HOWELL, JR.



*explore*

*To explore,  
to understand,  
to inspire,  
as only NASA can.*



# JSC keeps the Star

By Lisa Tidwell

The VPP Star flag still flies over Johnson Space Center. Created by the Occupational Safety and Health Administration (OSHA), the Voluntary Protection Program (VPP) is a cooperative program among employees, unions, management and OSHA to achieve a safer, healthier work environment beyond the requirements of OSHA standards.

The Center earned the honor of becoming a Star site in 1999 and, last month, JSC successfully became NASA's first site to renew its Star designation. The Sonny Carter Training Facility (SCTF) and Johnson Engineering at SCTF both have the honor of being NASA's newest Star site and NASA's newest contractor Star site, respectively.

Preparing for the initial VPP Star assessment in 1999 "required a substantial change in mindset – a very steep uphill climb," said Elmer "Bubba" Johnson, Special Assistant for JSC VPP.

"With this (recent) reassessment, it was very evident that over the last three years the Center has grown to the point that the philosophies of VPP are an accepted way of doing business," he said.

Kevin Rockwell, the VPP Audit Team Leader, commended the Center for its professional, well-coordinated and successful bid to retain its OSHA VPP Star rating.

Rockwell noted that the OSHA team was able to complete its audit a day ahead of schedule because of the superb preparation and attention to detail that JSC employees put into their safety training and VPP awareness programs.

Employees at JSC, led by Johnson, prepared for last month's VPP audit for nearly

two years. "There were approximately 200 folks around the Center who were directly involved in the audit and many, many more indirectly involved," Johnson said.

The final VPP audit reported that JSC had five 90-day contingency items, while SCTF and Johnson Engineering each had one 90-day contingency item. Three of the 90-day contingency items were fixed shortly after the audit concluded, and the final items will be corrected no later than 90 days from the end date of the VPP audit.

All of the sites were also given VPP Recommendations, which will be addressed in the near future. A VPP Recommendation is merely a suggestion that would reflect "above and beyond compliance," which is the philosophy behind the Voluntary Protection Program.

Sean Keppta, an Occupational Health Officer, said he was thankful that potential hazards were identified before they became a problem and JSC was given the opportunity to implement corrective measures.

During the VPP audit debriefing, Sue Garman, JSC Associate Director for Management, thanked the visiting auditors and congratulated JSC employees on the successful completion of this audit.

While keeping the Star is a victory, there is still work to be done. Johnson said that all three sites "must keep focused on continual improvement."

He added, "While it is initially desirable to take a step back, take a deep breath and relax, we must maintain focus and be vigilant."

The VPP auditors will return to the Center in 2005 to continue the assessment of JSC's Safety and Total Health Program. ♦

## Politically active? Know the Hatch Act!

By Lisa Tidwell

The Hatch Act of 1939 restricts the political activity of federal government employees and certain state and local government employees. The Hatch Act was substantially amended in 1993 with support from Senator John Glenn, giving federal employees greater freedom to be politically active.

However, Johnson Space Center employees must still know the guidelines. To learn about all the rules and regulations, visit the U.S. Office of Special Council (OSC) Web site at: <http://www.osc.gov/hatchact.htm> or call 1-800-85-HATCH.

"If JSC employees wish to be politically active, they need to know when, where and how since there are disciplinary repercussions for violations of the Hatch Act," said Dan Remington of the JSC Legal Office.

The Hatch Act only applies to federal employees as it relates to disciplinary matters. However, it affects everyone who works at JSC as it relates to the use of Center time and resources. "All persons in a federal workplace are subject to the regulations of government facilities, resources and time usage," Remington said.

The 1993 amendment to the Hatch Act defined a separation between the accepted political activities of Senior Executive Service federal employees and those at grade GS15 and below. The amendment opened the door for employees, GS15 and below, to be more politically active.

All federal employees can run for office in nonpartisan elections, such as those for the school board, city council or city official. They can participate in partisan and nonpartisan elections with some restrictions. In running for nonpartisan positions, employees still need to ensure that they don't create the appearance of a partisan election. This happened in the last City of Houston mayoral election. Both major parties lined up behind the two leading City of Houston mayoral candidates, creating the appearance of a partisan election.

This also recently occurred in the Fairfax County, Va., school board election. According to a press release from the U.S. Office of Special Counsel (OSC) in July 2002, the OSC has filed a petition for disciplinary action against a Department of Defense employee.

According to the petition, the employee took actions in his race for the school board that resulted in a partisan candidacy, despite the fact that candidates' names were placed on the ballot without any party designation.

The employee was cited for soliciting, accepting and advertising the endorsement of the local partisan party's district committee, engaging in political fund-raising, and soliciting and accepting volunteer services in a partisan election. To add insult to injury, the individual apparently lost in his election effort.

"Federal employees cannot run in partisan elections, participate in partisan fund-raising or use their title or position to influence people," Remington said. "But they can support party candidates and donate to a political party."

As mentioned above, the regulations for Senior Executive Service level employees are much tighter, and employees above GS15 cannot be as politically active. According to the OSC, these employees can still "register to vote as they please, join a political party and express opinions about candidates or issues."

The OSC provides advisory opinions on the Hatch Act and also enforces the provisions of the Act by filing petitions for disciplinary action. Violations of Hatch Act provisions applicable to federal employees are punishable by removal, or a minimum 30-day suspension without pay.

For more information, contact the JSC Legal Office at x33021 or (281) 483-3021.

A CLOSER LOOK: HATCH ACT RULES	<b>Federal employees may:</b> <ul style="list-style-type: none"><li>✓ be candidates for public office in nonpartisan elections</li><li>✓ register and vote as they choose</li><li>✓ assist in voter registration drives</li><li>✓ express opinions about candidates and issues</li><li>✓ contribute money to political organizations</li><li>✓ attend political fund raising functions</li><li>✓ attend and be active at political rallies and meetings</li><li>✓ join and be an active member of a political party or club</li><li>✓ sign nominating petitions</li><li>✓ campaign for or against referendum questions, constitutional amendments and municipal ordinances</li><li>✓ campaign for or against candidates in partisan elections</li><li>✓ make campaign speeches for candidates in partisan elections</li><li>✓ distribute campaign literature in partisan elections</li><li>✓ hold office in political clubs or parties</li></ul>
	<b>Federal employees may not:</b> <ul style="list-style-type: none"><li>✗ use official authority or influence to interfere with an election</li><li>✗ solicit or discourage political activity of anyone with business before their Agency</li><li>✗ solicit or receive political contributions (may be done in certain limited situations by federal labor or other employee organizations)</li><li>✗ be candidates for public office in partisan elections</li><li>✗ wear partisan political buttons on duty</li><li>✗ engage in political activity while:<ul style="list-style-type: none"><li>• on duty</li><li>• in a government office</li><li>• wearing an official uniform</li><li>• using a government vehicle</li></ul></li></ul>
For more information on your rights and limitations visit: <a href="http://www.osc.gov/hatchact.htm">http://www.osc.gov/hatchact.htm</a>	



# world space congress • 2002

## Houston to Host WSC • 2002

The space event of the decade, World Space Congress•2002 comes to Houston Oct. 11-19. Johnson Space Center will play a prominent role in the event as a Supporting Sponsor, but it will take your participation to make the NASA experience come alive!

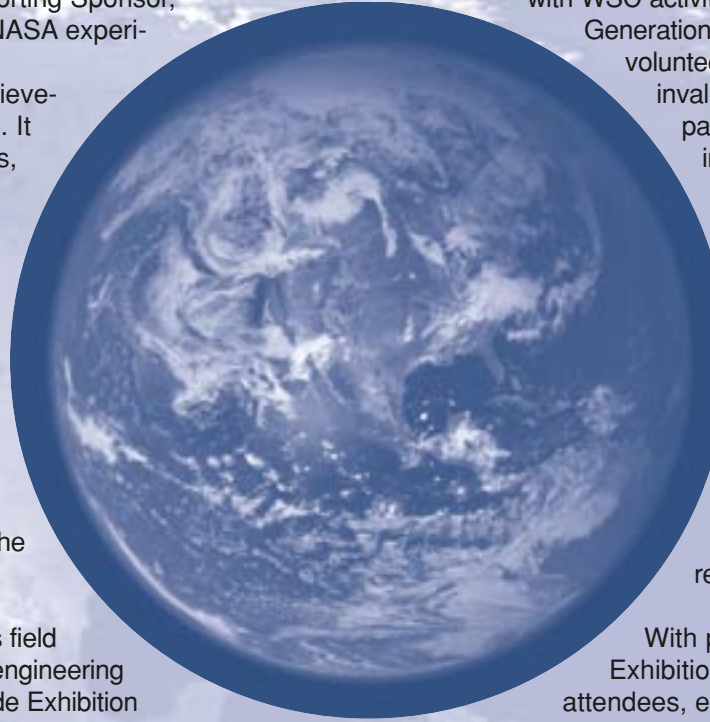
WSC•2002 allows JSC to present our achievements and learn more about others' advances. It is a gathering of more than 13,000 participants, where leaders in space science, engineering, industry and policy discuss the present state of space travel, showcase new research and technology and define a vision for the future.

The WSC•2002 is organized around four themes: International Space Station Utilization, Commercial Space Application, Life Sciences and Biomedicine, and preparing a vision for the next 25 years in space.

Its core events will be the assembly of the Committee on Space Research (COSPAR), the International Aeronautical Congress (IAC) and the International Trade Exhibition.

The COSPAR and IAC will host technical sessions, featuring more than 4,000 world-class field experts who will present cutting-edge science, engineering and technology research. The International Trade Exhibition fills more than 350,000 square feet, including exhibits by the international space agencies and commercial space providers. More than 100 JSC employees will speak, and JSC is supporting 3,800 square feet of exhibit space.

"World Space Congress is an excellent opportunity for us to share our space excitement and space achievements," said JSC Director Lt. Gen. Jefferson Howell, Jr., "as we continue our mission to understand and protect our home planet, to explore the Universe and search for life, and to inspire the next generation of explorers...as only NASA can."



## Employee Involvement

There are numerous ways for the JSC community to get involved in WSC•2002.. "We anticipate needing approximately 200 volunteers to help with WSC activities," said Julia Tizard, Director of Space Generation's Houston office and lead coordinator of WSC volunteer opportunities. "Employees of JSC will make invaluable volunteers, as they can use their personal passion for science to spark the public's interest in space."

The Space Rocks! Kids Festival and Discover NASA Day, held on Oct. 18 and 19 respectively, will call for JSC volunteers to lead hands-on activities and experiments, lead education trailer tours and supervise youth engineering competitions. On Oct. 12 and 17, volunteers can help at teacher workshops designed to provide teachers with science and math activities for the classroom. The JSC exhibit at George R. Brown Convention Center and the increased frequency of on-site tours will also require JSC volunteers.

With proper approval, employees may visit the Exhibition Hall without charge. Or, as paid, registered attendees, employees may attend the technical and plenary sessions. Many NASA employees and contractor representatives will be profiled during the event as field experts making presentations throughout the week. The final days of the Congress, Friday and Saturday, Oct.18-19, are open to the public.

### For more information:

<http://www.jsc.nasa.gov/wsc>

Volunteer opportunities on site and at the JSC exhibit at George R. Brown

<http://unsgoc.org/sgs/volunteer/>  
Volunteer opportunities

## Your Guide to the WSC • 2002

### Attending

With supervisor approval and your JSC badge, the Exhibition Hall is free of charge to industry professionals throughout the week. Note: Free admittance to the WSC•2002 Exhibition Hall does not include admittance to the technical sessions or plenary events. See the JSC Web site for complete details.

### Volunteering

Whether it's for a one-hour shift or a full day, working with kids at the education booths or assisting with a technical briefing, hundreds of volunteer opportunities exist for WSC•2002. Visit the JSC WSC Web site for complete details and a link to a complete volunteer list.

### Getting There

As parking at the George R. Brown Convention Center will be extremely limited, JSC employees (volunteers and presenters) are advised to use JSC-provided transportation to the site. Visit the JSC WSC Web site for details and schedules as they become available.

### For Kids

World Space Congress•2002 has a multitude of activities and events designed for students, children and families.

**SPACE ROCKS! Kids Festival** will be held on the main campus at the University of Houston Oct. 18.

**Discover NASA Day: Astronauts, International Space Station and Beyond** This event, at the George R. Brown Convention Center on Saturday, Oct. 19, is also free and open to the public, and will feature the best of JSC just for kids.

## World Space Congress • 2002 Schedule

Space Ops 2002 Oct. 9-12	
ISS Utilization Oct. 10-11	
Technical and Plenary Sessions Oct. 10-19	
The Space Generation Summit Oct. 11-19	
Space Policy Summit Oct. 11-13	
The International Trade Exhibition Oct. 14-19	
Space Rocks! Oct. 18	
Discover NASA Day Oct. 19	

## MORE INFORMATION

[www.jsc.nasa.gov/wsc](http://www.jsc.nasa.gov/wsc)

[www.aiaa.org/wsc2002](http://www.aiaa.org/wsc2002)

## Explore... The Exhibit

More than 15,000 square feet of NASA exhibits will give the Agency a sizeable presence at the World Space Congress•2002.

"In our exhibits, we are portraying the efforts of all major Centers and highlighting the best technology of today and the best developing technology of the future," said Jim Hull, NASA Exhibit Director.

JSC is participating in NASA's Human Exploration and Development of Space (HEDS) exhibit, where WSC•2002 attendees can catch a glimpse of what life in space is like and how future space exploration might evolve. They will meet Robonaut, the moving humanoid robot developed by engineers at JSC, one of the exhibit's many interactive demonstrations.

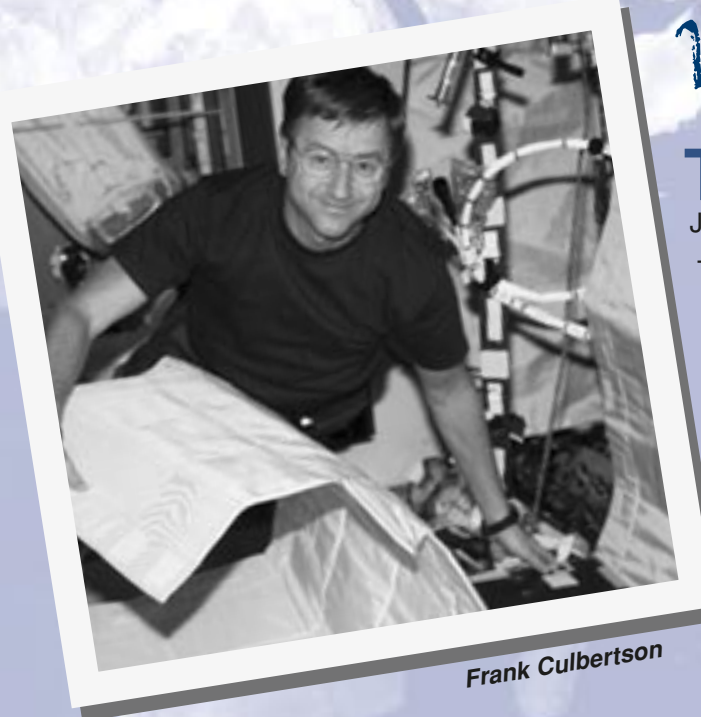
The exhibit will also emphasize current space and life science research through hands-on displays and highlight advanced propulsion technology through a model of the developing Variable Specific Impulse Magnetoplasma Rocket (VASIMR) engine. Peripheral exhibits will highlight NASA's educational programs and display the commercial avenues for space technology.

JSC, through the HEDS exhibit, is targeting the space community and the public, allowing them to explore the current technology, the possibilities for the future and the benefits for Earth. The exhibit will reach everyone from members of the general public to heads of state, foreign diplomats and perhaps even President Bush.

The exhibit is open to industry professionals from Oct. 14-19 and to the public on Oct. 18-19.



Robonaut



Frank Culbertson

## Understand... Plenary and Technical sessions

The International Space Station – A Key to the Future: Advancing Science and Technology through International Teamwork in Space will be one of the featured World Space Congress Joint Plenary sessions on Oct. 14, 2002.

To reveal the experiences of building and operating the premiere human outpost in space, program managers from the United States (NASA and Boeing), Canada, Europe, Japan and Russia, joined by representatives from the Astronaut and Cosmonauts corps and a leading NASA science representative, will share their stories about accomplishments, opportunities and challenges associated with creating this "new star on the horizon."

"The International Space Station is the pathway for human exploration, research and development of space for decades to come," said Bill Gerstenmaier, ISS Program Manager, NASA. "This monumental effort to construct an international laboratory complex is a model for cooperation among nations. This research facility in space will enable new, unimaginable discoveries."

More than 100 technical sessions, supported by either COSPAR or IAC, are designed to spark critical dialogue among the providers, users and integrators of space systems, as well as to showcase the current and future space technologies and their applications.

## Inspire... Education and Outreach

You can't have a week of space activities without involving kids, who are some of the space program's most avid fans. Education outreach programs like the Space Rocks! Kids' Festival, engineering design competitions and the Distance Learning Outpost are fun-filled, interactive ways to educate and interest kids in science, engineering and math.

The Space Rocks! Kid Festival, held on Oct. 18 at the University of Houston (U of H), will provide JSC an opportunity to educate kids and their parents about space research. Participants can tour the Benefits of Space and the Space Station Imagination trailers, as well as perform physics demonstrations, rocket launches and other hands-on activities. U of H will also host an international Robotics Invitational and a Mars Rover Competition for students.

At the George R. Brown, the Distance Learning Outpost will broadcast nine video Web conferences during the WSC•2002. Four of the Web conferences will feature the Space Kids Update, a space news program that educates students about interesting, current happenings in space – topics spanning from experiments on ISS missions to advances in the aeronautical industry.

The WSC•2002 Web conferences will be accessible at <http://spaceflight.nasa.gov>. Teacher workshops that coincide with the WSC•2002 are also planned to develop fun, interactive activities that help teachers to communicate space science.



Kids ♥ NASA!



# Co-op students bring enthusiasm to JSC, get experience in return

By Lisa Tidwell

**K**aren Nyberg still recalls how she entered the gates of Johnson Space Center excited, but a little overwhelmed, to begin her work as a Cooperative Education (co-op) student.

It was January 1991 and the University of North Dakota junior was joining the Automation and Robotics group. Upon arrival, she was given a project: The Robot Friendly Probe and Socket Assembly. It eventually led to a patent.

After her success here at JSC, that co-op went on to earn her doctorate and, nine years later, started Astronaut Candidate Training in August 2000.

This is just one of the numerous success stories to come from the JSC Cooperative Education Program in its 41-year history. However, students are not the only ones who benefit from the program; JSC team members also benefit from the talents of young minds.

"The students' enthusiasm helps JSC continue to be a great place to work," said Kim Wilson, a three-time co-op mentor in Human Resources. "It is an outstanding program that produces loyal JSC employees."

Since its conception, NASA has relied heavily on its co-op program as a source of potential employees. Co-ops are vital to the Center's continuing commitment to technological advancement and excellence.

## A valuable JSC resource

The JSC Cooperative Education Program began in March 1961. Today, Co-op Program Manager Bob Musgrove runs it with the assistance of Sharon Evans. Approximately 160 students, representing more than 50 schools, are in the program.

The majority of co-ops are undergraduates majoring in engineering, although a limited number of business and computer science students, as well as graduate students, are in the program. The application and interview process is highly competitive: Typically more than 800 resumes are received each year for 50 new co-op positions.

To qualify, an applicant must be a full-time student at a four-year college or university and maintain at least a 3.0 grade point average with the usual GPA being closer to 3.5. "Most of our co-ops are overachievers," Musgrove said.



NASA JSC 2002e33647 photo by Bill Stafford  
**Bob Musgrove (right) and Sharon Evans coordinate the Cooperative Education Program. Here, they are shown being honored by the students for their hard work and dedication.**

treadmill problem is being developed by student Dean Blom, while Public Affairs co-op Julie Burt develops content for the *Horizons*, a spokesperson's guide for the ISS.

The students work in entry-level positions in human resources, public affairs, mission operations, crew training and every aspect of science and engineering. Musgrove said co-ops typically change divisions at JSC with each tour, which helps them find the best place for them at the Center. After graduation, co-ops can go on to many roles within NASA.

"(Co-oping) gave me an opportunity I might not otherwise have had," said former co-op and current JSC Newsroom Chief Eileen Hawley. "The Center thinks highly of the people that come into the co-op program."

Students have worked hard over the years to gain that respect. "The co-ops tend to exceed our expectations of a student employee," Musgrove said.



NASA JSC 2002e33645 photo by Bill Stafford  
**Co-op Louis Malone II, left, works with his mentor Mike Belansky in the Space Station Training Division Project Office. Prior to his JSC co-op opportunity, Malone was a computer science instructor at University of Houston-Downtown. 'I will never forget how much credibility the people in my area placed upon me,' Malone said.**



NASA JSC 2002e33644 photo by Bill Stafford  
**Jaime Strandmark, at right, an aerospace engineering and mechanics senior at the University of Minnesota, is completing her third and final tour at JSC. Besides helping train the crew of STS-110/8A for their space walk activities, the two-time world champion trampolinist Strandmark is currently training for the 2004 Olympics in Athens. She is pictured here with her mentor, Dana Weigel, and Astronaut Michael Lopez-Alegria (Captain-USN).**

## A special bond

Co-ops could not do all of these projects alone: Mentors are the key to success for the co-op program. The students in the program are paired with mentors to help them navigate through their tours. Mentors help foster a positive learning experience for their students.

This relationship benefits the mentor as well as the student. The mentor develops coaching skills important to success as a supervisor, and gains satisfaction from developing new talent. Through mentoring, employees can shape the future of their organization and influence a co-op's career path.

To show their appreciation, co-ops can nominate their mentor for a mentor award.

The selected mentors are included in the Co-op Mentor Hall of Fame, which is located at <http://coop.jsc.nasa.gov/mentor/halloffame.htm>.

"It is a win-win situation," said former co-op Brad Strong of the Systems Training Branch. "Not only do the students get a great experience, they produce products." ♦

To learn more about the co-op program, visit <http://coop.jsc.nasa.gov/>

## The life of a co-op

A co-op also must be available to complete three rotations at JSC prior to graduation. Those work tours provide the student with valuable, hands-on work experience in between semesters at school.

For example, co-op students Nick Skytland and Jessica Bicks are developing a better way for astronauts to shower during their stay aboard the International Space Station. New hardware to fix the ISS's

## A CLOSER LOOK: ASTRONAUT JANICE VOSS



NASA JSC S99-10566

Janice Voss worked with parachute pyrotechnics when she started at NASA as a Cooperative Education student in 1973.

Shortly after starting, she was moved to Bldg. 16 and the Shuttle Avionics Integration Lab (SAIL) where she wrote code to simulate the environment that the shuttle would see in flight. Voss worked five co-op tours while obtaining her bachelor's degree from Purdue.

In 1991, after earning her doctorate from the Massachusetts Institute of Technology, Voss was selected as an astronaut. Today she flies in the SAIL facility where her environmental code is still used. Dr. Voss has stayed involved with the co-op program by renting rooms in her home to students.

"The main difference is the program is more socially organized, there is more bonding between the students," she said.

Even after nearly 30 years since working as a co-op, Dr. Voss said, "The jobs are very similar; the students are still doing real work."

Get to know our co-op students! Read their biographies at: <http://coop.jsc.nasa.gov/biography/biographies.htm>



# Safety & Total Health Day is right around the corner

Johnson Space Center’s Seventh Annual Safety & Total Health Day will be Wednesday, Oct. 23. This year’s theme is “Be safe, for the health of it.”

The event will include various speakers, shows and booths to help JSC employees work – and live – safely. One of those scheduled speakers is Center Director Lt. Gen. Jefferson Davis Howell, Jr. While Howell believes JSC has “a wonderful safety record,” he stressed that there is always room for improvement. He called Safety and Total Health Day “a reminder to us, sort of like the booster shot you take from time to time, to make us reflect on what it takes to really be a top-running, safe organization.”

In addition to the activities on Oct. 23, Safety & Total Health Day will be given a kick-start by a few events the week before. Below is a schedule of the activities:

**Wednesday, Oct. 16**

11:30 a.m., Teague Auditorium. Dr. Robert Conn: “Changing Behavior to Avoid Injuries.” Dr. Conn, a former pediatric heart surgeon, founded the SmartRisk Foundation and now speaks publicly about injury prevention.

7 p.m., Gilruth Center Ballroom: SmartRisk Foundation’s HEROES program. HEROES is an innovative road show designed to encourage young people to take risks, but to do it safely. JSC civil servant and contractor employees are encouraged to bring their families to this event. Entry to the Gilruth Center is through Gate 5.

**Thursday, Oct. 17**

7 p.m., Gilruth Center Ballroom: SmartRisk Foundation’s HEROES program. (See Oct. 16 listing for details.)

**Wednesday, Oct. 23**

11:30 a.m.-3:30 p.m., JSC’s mall area: booths providing information on safety, health and the environment.

11:30 a.m., Teague Auditorium: Center Director Jefferson Howell. Opening remarks.

12 p.m., Teague Auditorium: Lt. Col. Graham Buschor, Chief of Safety of the 106th Rescue Wing, New York Air National Guard. Buschor was one of the pilots responsible for a dramatic rescue at sea featured in the novel *The Perfect Storm*. He will recount the event and provide information on boating safety.

1 p.m., Teague Auditorium: Billy Robbins. Robbins lost both of his hands in an accident with a power line, and now uses his experience in his presentations about accident prevention. Robbins uses a humorous yet direct approach when speaking about achieving an accident-free workplace.

2:30 p.m., Teague Auditorium: Daren Brooks, founder and CEO of Health Restoration Systems. Brooks will speak about stress. In addition to maintaining a rehabilitation center for chronically ill patients, Brooks teaches stress management sessions at NASA and at Wyle Laboratories.

3:30 p.m., Gilruth Center: JSC Health Run/Walk. Directorates compete for the George W. S. Abbey Award. If interested, sign up through the Safety and Total Health Day Web site: <http://www4.jsc.nasa.gov/safety/index2.htm>.

## Lunar rocks land at White Sands Test Facility

By Cheerie R. Patneau

A portion of NASA’s lunar rocks and soil sample collection from the Apollo Program has been housed in a super-clean, secure vault at Brooks Air Force Base in San Antonio for many years. This was done to provide an alternate storage location in the unlikely event a disaster was to befall the primary collection at Johnson Space Center in Houston.

However, the Air Force base is being deactivated and the samples must be relocated later this year. When selecting a new home for the collection, many factors had to be considered, such as seismic activity, susceptibility to hurricanes or tornadoes and physical security.

In the end, NASA Johnson Space Center’s own White Sands Test Facility (WSTF) near Las Cruces, N.M., was given the honor.

A secure keeping room consisting of a 10-by-12-foot vault and an attached 8-by-16-foot Class 1000 cleanroom were constructed inside an existing building to house and secure this 52-kilogram portion of the full 382-kilogram collection. Slated for storage at the test facility is 4.5 percent of the total NASA samples.

Justin Kerr, Lisa Vidonic and Jack Warren are a few of the NASA JSC personnel working with WSTF engineers to ensure the integrity of these priceless specimens for many generations to come.

Dr. Gary Lofgren, NASA Lunar Curator at JSC, said the WSTF lunar facility “is a joint effort between JSC and the test facility in a collaborative effort to maintain the integrity of the lunar samples.”

The diverse collection at WSTF will never be on display. The rocks and soil samples to be stored there are kept in hermetically sealed, triple-wrapped Teflon bags. These bags are packed into gallon-sized stainless-steel containers with bolted tops, purged with dry nitrogen and stored in a stainless-steel cabinet inside the bank-like, double-locked reinforced concrete and steel vault.

“The stored lunar collection will be secured at the test facility as a precaution against a catastrophe – such as hurricane, theft, vandalism, physical abuse, a chemical reaction due to exposure to Earth’s atmosphere – and to prevent contact with terrestrial matter,” said Richard Von Wolff, who is the NASA WSTF Project Manager for construction of the secured lunar storage facilities.

Even though most of them will never see the collection, all WSTF team members still have something to get excited about.

“A large museum-grade Moon rock will be on temporary display for the test facility personnel, with an accompanying story board,” Von Wolff said.

If JSC needs the samples for experiments or any other reason, Von Wolff said the collection would be shipped back and opened under a glove-box operation to maintain the integrity of the samples. The items are catalogued by Moon landing site and collection point, with a numbering scheme distinguishing soils from rocks.

“Many people may think the rocks and soil samples are a dull Moon-dust color, judging by the color of the Moon itself. However, the lunar samples actually do have some color and many contain crystals,” Von Wolff said.

These samples won’t be the state’s first lunar samples.

“The New Mexico Museum of Space History at Alamogordo currently has a larger lunar rock on public display, courtesy of NASA,” Von Wolff said, “and there is another on public display in the Museum of Natural History at Albuquerque.”

A CLOSER LOOK: THE LUNAR SAMPLES

### Even after three decades, they continue to captivate

“The lunar collections are still exciting to us 30 years later,” Dr. Gary Lofgren, NASA Lunar Curator at JSC, said.

Today, around the world, between 50 and 60 scientists research the samples. Currently, there are 300 to 400 samples sent out for scientific study each year, Lofgren said.

The results of these studies are presented annually at the Lunar and Planetary Conference in Houston. Of the 12 to 13 scientific sessions each year, typically two or three of them are devoted to the study of lunar samples, he added.

“NASA also asks the National Academy of Science for recommendations on future missions,” Lofgren said. “The academy has recommended that NASA send a mission to the Moon to collect more samples.

“The academy gave this mission a high priority, and this mission would also provide a good opportunity to test techniques for collecting samples on Mars. Perhaps a lunar robotic mission can be a possibility in five to seven years.”



# Profiles

## Hispanic Heritage Month Observance

Sept. 15- Oct. 14

### Gerard D. Valle

**Time at JSC:**

15 years

**Organization:**

EB2: Project  
Development Branch

**Position title:**

TVIS 1.1 Project  
Manager

**Education:**

Bachelor's of Science  
in Aerospace Engineering,  
Texas A&M University

**Place of birth:**

San Antonio, Texas

**Hobbies:**

Family activities, sports and riding  
my motorcycle.

**What does Hispanic Heritage Month mean to you?**

Being proud of my heritage.

**Favorite words of wisdom:**

Have fun and do the right thing.



NASA JSC 2002e34384

### Natalie V. Saiz

**Time at JSC:**

17 years

**Organization:**

Human Resources Office

**Position Title:**

Chief, Human Resources Management Branch

**Education:**

Bachelor's of Business Administration, University of New Mexico  
M.A. in Human Resources Management, University of Houston-Clear Lake

**Place of birth:**

Albuquerque, New Mexico

**Hobbies:**

Working on Creative Memories scrapbooks for my three children, beginning yoga, reading all the Harry Potter books

**What does Hispanic Heritage Month mean to you?**

I think about my grandmother, who raised five children on her own. My grandfather died from tuberculosis in his 30s since he worked in the potash and copper mines early in his life. I think about my grandmother's encouragement and faith she had in me. She has been my rock and someone I always look up to. My grandmother is very wise and instilled a sense of pride about my culture. She was also very progressive and always encouraged me to reach for the stars. I thank you, Tana, for being the most wonderful grandmother in the world!

**Favorite words of wisdom:** It's very important to keep a balance between your family and work life.



NASA JSC 2002e33845

### Yolanda G. Garza

**Time at JSC:**

Five years

**Organization:**

University of Texas-El Paso/  
NASA Office

**Position Title:**

Management Assistant

**Education:**

Currently attending the  
University of Texas-El Paso

**Place of birth:**

San Antonio, Texas

**Hobbies:**

Traveling and painting

**What does Hispanic Heritage Month mean to you?**

It means that we celebrate and recognize the many accomplishments Hispanics have achieved and contributed in the building of this nation. We should be grateful to our Hispanic forefathers as they laid the groundwork for us. They suffered through tough times to ensure their offspring reaped the benefits of their work and that Hispanics gained recognition as an equal amongst men.

**Favorite words of wisdom:**

"The tragedy of life doesn't lie in not reaching your goal. The tragedy lies in having no goal to reach." – Benjamin Mays



NASA JSC 2002e14055

### Beto Sanchez

**Time at JSC:**

22 years

**Organization:**

Mission Operations Directorate, DA8/Flight Director Office

**Position title:**

Assistant for Program Integration

**Education:**

B.S. in Mechanical Engineering, University of Texas

**Place of birth:**

Columbus, Wisconsin

**Hobbies:**

Travel, sailing, windsurfing and bicycling

**What does Hispanic Heritage Month mean to you?**

It gives me some good reminders of things that my grandparents and parents might have seen, known, done and been.

**Favorite words of wisdom:** You have to be strong enough in order to be able to afford to absorb the cost of being good and doing the right thing.



NASA JSC 2002e34382

### Frank Moreno

**Time at JSC:**

17 years

**Organization:**

Space Shuttle Program

**Position title:**

Payload Integration Manager

**Education:**

B.S.E. in Electrical Engineering, University of Houston

**Place of birth:**

Houston, Texas

**Hobbies:**

Reading, traveling, running, training with weights

**What does Hispanic Heritage Month mean to you?**

To me it means having Spanish blood in your lineage. With it comes a heritage of unfortunate misdeeds but also a heritage of the greatest explorers that have ever lived. These explorers extended Spanish presence to every part of the world and were instrumental in the development of western civilization. Our racial diversity is the spice of life; we come in all colors but all speak Spanish and are strong in faith. There is a basic instinct to enjoy (gozar) our families and life itself that is ingrained in each of us.

**Favorite words of wisdom:** "Be strong in faith" and "Life is what you make of it."



NASA JSC 2002e33844

Photos by Bill Stafford

## SPACE CENTER Roundup

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